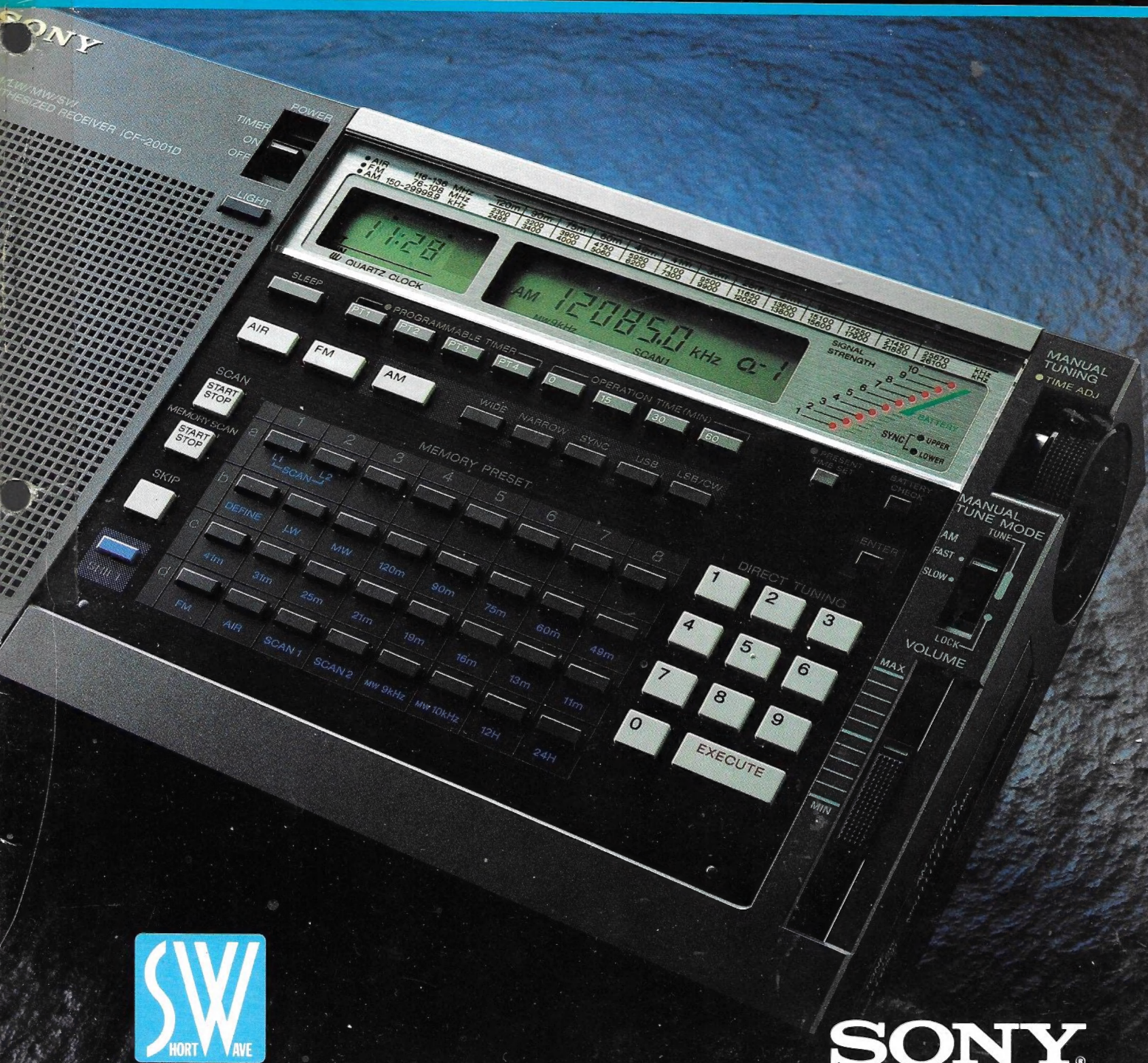


SONY SHORT WAVE

■ ■ ■ ■ RADIOS ■ ■ ■ ■ ACCESSORIES ■ ■ ■ ■

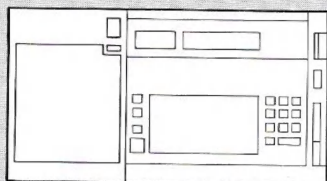


SONY®

The diagrams shown in the contents list, below, have been reproduced in size relation to one another, to give you an immediate scale comparison.

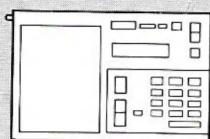
ICF 2001D

3



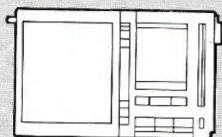
ICF 7600D

8



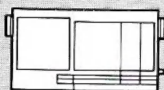
ICF 7600A

9



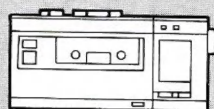
ICF 4900

9



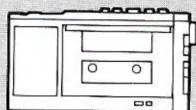
WA 8000

10



WA 6000

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STATIONS WORLDWIDE

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12



ICF 2001D

SW THE WORLD'S WAVEBANDS AT YOUR FINGERTIPS SW

In the ICF 2001D, Sony has revolutionised the Short Wave radio receiver, applying for the first time state-of-the-art expertise to a consumer unit.

Wherever you travel, the remarkable combination of leading edge technology and push-button keypad simplicity in the ICF 2001D brings the world's wavebands to your fingertips – all packaged in a compact, distinctive styling for which Sony is renowned. It really is the ultimate in sophisticated Short Wave.

Both reception and tuning on the ICF 2001D feature refinements previously known only to professional broadcasters and a select few SW enthusiasts.

High-quality SW reception becomes as simple as tuning into BBC Radio 4 on Long Wave. At the push of the "Sync" button, the advanced Synchronised Detection System (SDS) gives sharp, clear reception, reducing sound distortion by phasing phenomena and reducing beat



interference from adjacent stations.

Dual PLL synthesised circuitry, hitherto found on the Sony ICF 2001D, gives direct access tuning to continuous wavebands from 150-29999.9KHz (on Short Wave) in 100Hz steps.

Short Wave offers both the enthusiast and the regular listener a wealth of riches – take the BBC's broadcasting on SW, for example, spread across 30 different frequencies, over 30 time zones and in more than 20 languages.

The microprocessor controlled tuning in the ICF 2001D offers the ultimate in flexibility with its remarkable total of 32 memory presets coupled with 4 independent programmable timers.

Read on for a long look at the most exciting Short Wave newcomer from Sony – the ICF 2001D.

SW The ICF 2001D – A radical new look for Short Wave

The ICF 2001D receives Short Wave with a clarity you'll find hard to believe, thanks to its remarkable built-in Synchronised Detection System – this reduces distortion from phasing and beat interference yet maintains high precision 100Hz step tuning.

SW Twin chips for multi-function Short Wave

At the heart of the ICF 2001D are the twin microprocessors that provide the receiver's remarkable combination of multiple functions and simple operation. While one chip manages the detection modes of the PLL synthesiser and controls the various scanning modes, the second provides the 32 programmable preset timer operations.

SW Superwide frequency coverage with continuous reception

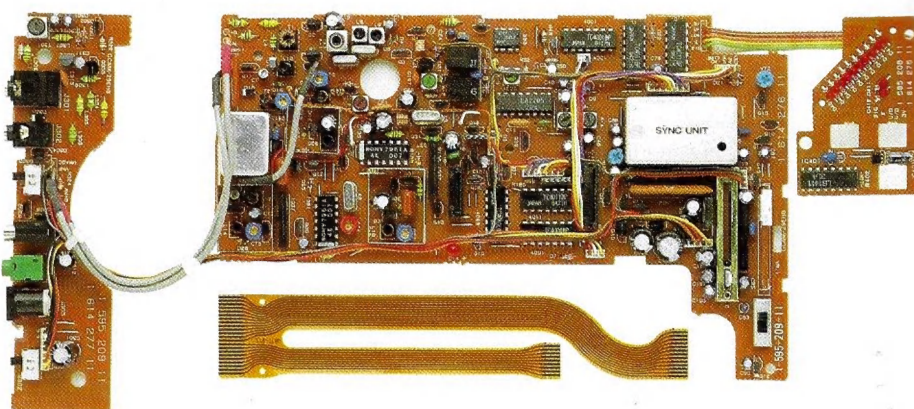
On the ICF 2001D you can move from Long Wave to Short Wave without a single change of the band selector – completely continuous AM reception from 150 - 29999.9 KHz is available. Other highlights of the receiver's superwide frequency coverage are shown below with SSB and continuous wave modes also being available.

Band	Frequency	Coverage
FM	76.0-108.0	MHz
LW	150-530	KHz
MW	530-1620	KHz
SW	1620-2999.9	KHz
AIR	116-136	MHz

SW Advanced circuitry for high sensitivity, low interference SW

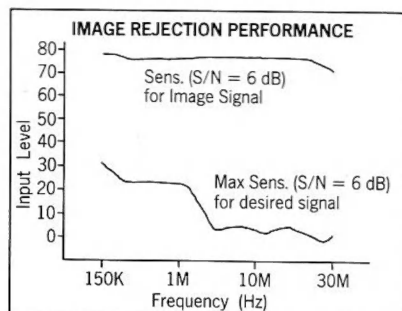
A highlight of the ICF 2001D is its backbone of advanced circuitry that both boosts sensitivity to signals and suppresses interference from adjacent signals – hitherto a major problem of SW reception.

Interference suppression circuits monitor the signal as it enters the receiver. One of a host of novel features of these circuits is the use by Sony of specially developed low



noise and high gain FET (2SK 152) transistors, at the receiver's front end. These provide superior multiple signal interference and are supported by NFB circuits incorporating antenna and AM RF amplifiers and effective against various modulation interferences.

Other notable features include the high performance FET balanced mixer employing a wide range transformer on the input side. This provides better fundamental performance, while the Super Low Noise FET (2SK 152) improves multiple signal interference rejection and conversion gain.



SW Dual-Conversion Super Heterodyne Circuit

Sony's exclusive Dual Conversion circuit overcomes one of the most common SW reception problems – the occurrence of image signals on the desired signal.

The Dual Conversion system, an established feature of Sony's advanced multi-band receivers for some years, uses a two step IF stage, with the first step much higher (55.845MHz) than the second. This shifts the image signal far away from the frequency of the desired signal, reducing the strength of the unwanted signal and producing reception that is

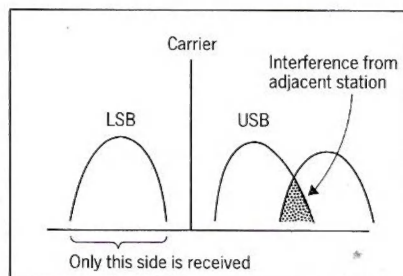
virtually free from image interference and its attendant distortion.

SW Synchronous Detector Circuit

Another exclusively Sony circuit, the SDC helps reduce interference from adjacent stations and keep phasing to an absolute minimum. And the SDC circuitry in the ICF 2001D is very special indeed, as it's the first time it has been seen in a consumer SW receiver.

Until now, SDC was costly to make and had a high power consumption. Now, however, Sony's traditional ingenuity has led to the development of a single chip for the SDC system – one featuring extracting IF carrier circuitry, a double balance mixer with low voltage operation, 90 degree phase shift and PLL lock-up time changing circuitry.

Here's what SDC does – when a signal is generated, it is radiated toward the ionosphere and reflected back to earth. But because the height of the ionosphere regularly fluctuates, it causes the signal to fade, which in turn causes the carrier frequency level to fluctuate and so produces distortion. Add to this, interference from adjacent stations, and SW listeners can have signal problems!



Sony's Synchronous Detector Circuit generates the same carrier frequency as the one being tuned, synchronised in both phase and frequency and so compensates for the original carrier and enables the clearer detection of the signal. It also

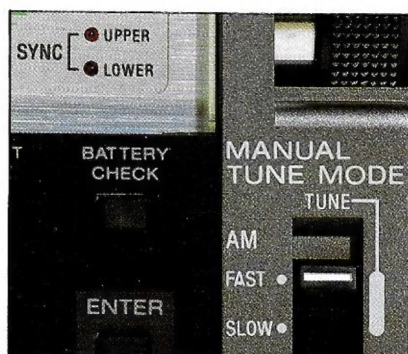


permits reception on only one of the two sidebands (upper and lower) transmitted with the signal to avoid interference from adjacent stations.

Because of the self generated synchronised carrier signal, fading is reduced and interference on either sideband can be avoided.

SW SDC Reception

Tune to the desired signal and push the SYNC key. SYNC will be indicated on the display and the SYNC indicator will light up on either Upper (for USB) or Lower (for LSB). Turn the Manual Tune Mode to Slow (100Hz step). Turn Manual Tune knob slowly to light the other indicator (upper or lower) and compare the sound. By doing this, you can select USB or LSB and choose whichever has less interference.



SW Ultra-high accuracy tuning in 100Hz steps

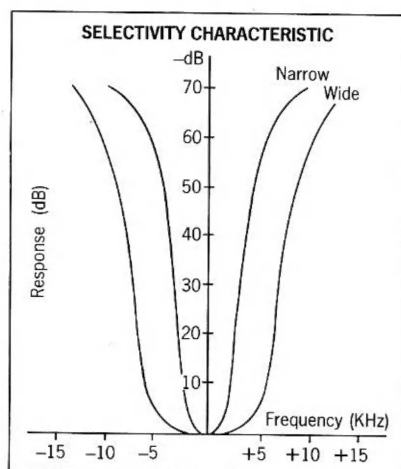
The ICF 2001D features precise tuning in 100Hz steps from 150KHz to 29999.9KHz. It achieves this through a newly developed integrated circuit with dual loop PLL synthesised circuitry – dual loop, because two synthesisers are needed to overcome the common problem with high accuracy 100Hz tuning of low reaction and lower purity through a local oscillator.

Sony's solution is for each synthesiser to compare the operation of the other and extract 100Hz steps from the basic crystal oscillator. This provides a perfect local oscillator and so offers an effect free of time changes.

SW Twin crystal filters

Super selectivity in tuning is achieved by two pieces of monolithic crystal filter in the first IF stage (55.845MHz) – very narrow band, yet with very low loss. Together with a 6 element "rudder-type" filter in the second IF stage (445KHz), this yields super selectivity of $\pm 2.2\text{KHz}$ at -6dB s band-width and $\pm 5\text{KHz}$ at -50dB s when the narrow AM band is selected

(the AM wide band can, of course, also be selected).



SELECTIVITY

1/2 band width	Mode	Wide	Narrow	SSB
-6 dB		$\pm 5.5\text{ KHz}$	$\pm 2.2\text{ KHz}$	Side Band Suppression
-50 dB		$\pm 9\text{ KHz}$	$\pm 5\text{ KHz}$	-26 dB

INTERFERENCE REJECTION AT 11.8 MHz

Image Rejection	1st IF Image	76 dB
	2nd IF Image	70 dB
IF Rejection	60 dB	

SW Five-way tuning

1. Programmable flexibility

Short Wave is a law unto itself, characterised with differing broadcasting times and multiple frequencies – so the ICF 2001D's programmable memory preset function makes it the perfect SW receiver.

At your control you have 32 presets, all selectable at the push of a button. For example, memorise one station and its four frequencies, or eight different stations. And it's not only frequencies you can program – there's also AM reception mode (wide or narrow), "Sync", USB/LSB, etc, all of which will be indicated when you select a memorised AM station.

2. Memory scan tuning

The ICF 2001D can scan all memorised stations identified by indexes "a1" to "d8" in turn, stopping on each for 5 seconds and then proceeding. Or you can skip unwanted memorised stations, or even entire broadcasting bands – for example, you may want to scan just from "a1" to "d8", or scan only AM or FM. The memory scan lets you do just this.



Memory preset indicating a preset frequency at a1.



Memory scan indication SCAN indicating scanning function is in operation, a receiving frequency and memory preset number is shown.



Skip indication mark ▼ shows that a memory preset will be skipped during memory scanning.



Skip indication ▼ shows that the AM band will be skipped.

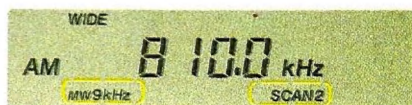
3. "Define" scan and broadcast band scan

The ICF 2001D will also scan automatically from low to high frequency with the wavelengths defined inside a single band, and between individual SW or AM bands.

Two scan modes can be set, mode 1 stops at the first station received, mode 2 continues scanning after 1.5 seconds reception of each station.



Indicating MW reception being scanned in 10 KHz steps using SCAN 1 mode.



Indicating MW reception being scanned in 9 KHz steps using SCAN 2.

NB MW in major countries is broadcast in steps of 9 KHz; in USA and Canada in 10 KHz steps. With the ICF 2001D you can select step scanning in either 9 or 10 KHz steps.

In addition, you can choose from two types of scan area. Broadcasting Band Scan (available on AM, FM and Airband) limits reception to stations within a specified band, while Define Scan specifies a frequency, which may

include all or part of a broadcast band (or bands) as well as frequencies between bands.

4. Digital display with analogue feeling

Manual tuning in 100Hz (slow) or 1000Hz (fast) steps is provided on the ICF 2001D for those situations when you need "analogue feel" –

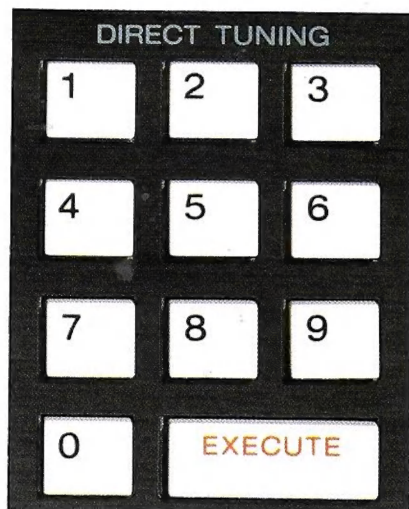


when you don't know a station's frequency, or you want to tune in really accurately after scanning. Manually selected frequencies can, of course, be "locked in" once located.

The same feature is available on FM (in steps of 0.05MHz) and Airband (0.025MHz).

BROADCAST BAND		SCAN STEP
LW		3KHz
MW		9KHz(10KHz)
S W	120m	5KHz
	90m	
	75m	
	60m	
	49m	
	41m	
	31m	
	25m	
	21m	
	19m	
	16m	
	13m	
	11m	
FM		0.05MHz
AIR		0.025MHz

5. Direct, "instant", microchip tuning Frequencies can be input directly via the tuning keypad on the ICF 2001D, which gives you access to two microchips that operate instantly you press the "Execute" button, greatly improving tuning speed and accuracy.

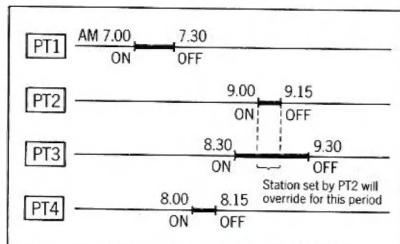


Programmable timer means you don't miss a thing

Short Wave broadcasting time is often very short and wavelength changes are frequent, so it's all too easy to miss a particular broadcast.

With the ICF 2001D's timer you won't miss a thing. It offers you the option of setting the receiver for up to four programmes in a 24 hour period, with each programme lasting up to 60 minutes, after which the radio will automatically switch itself off. It's perfect for auto-switching

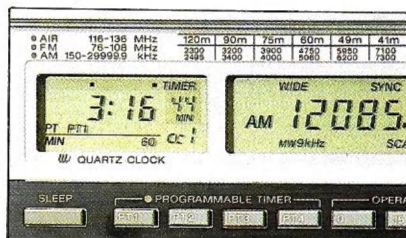
between stations to hear, for example, regular news broadcasts. Like everything else about the ICF 2001D, setting the timer is simple, as the following example shows.



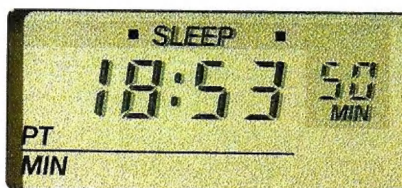
The timer also offers a "Sleep" function that can be set in units of 60, 30 or 15 minutes, at the end of which the receiver will switch off automatically.

Check your status at a glance

You can monitor the ICF 2001D's status at a glance using the large,

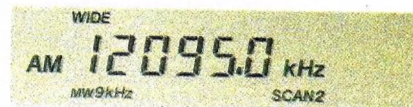


Indicates a frequency memorised at a1 will be received for 60 minutes from 3 am and that the broadcast has been received for 16 minutes.



Sleep timer is easily set for 60, 30 or 15 minute periods with a countdown in minutes (ie. time remaining) shown to the right of the 12/24 hour clock. When countdown time reaches zero, the radio will automatically be switched off.

easy-to-read, low power consumption centralised LCD display. This shows the frequency selected, the reception mode, the memorised frequency and memory number of a memory preset (if in use), the memory scan function, the skip indication and the scan mode indication.



Indicating AM reception with WIDE selectivity.



Indicating AM reception with NARROW selectivity.



Indicating AM reception with synchronised detection system SYNC.



Indicating AM reception with SSB mode on LSB/CW.



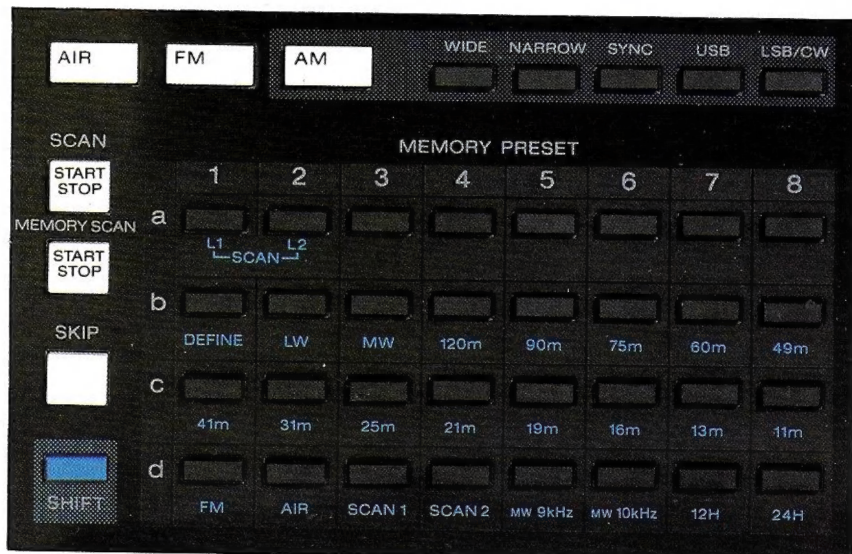
Indicating AM reception and its selectivity on USB.

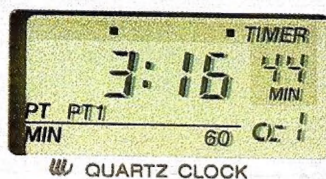


Indicating frequency shown at a1 is memorised station received - frequency is identified.



Indicating scan function whilst memory scanning in operation - SCAN is identified.





❖ If you've got it wrong...

Set the ICF 2001D for incorrect operation, for example, incompatible band and wavelength and an "Error" sign is immediately displayed.

❖ Gain control for AM RF

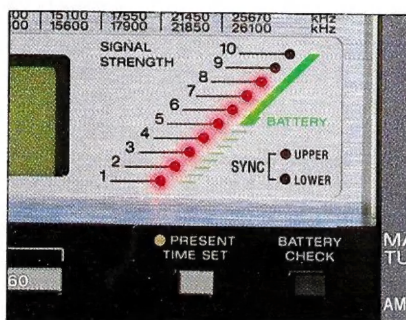
When a very strong signal is received there may be sound distortion. The AM RF gain control not only solves this problem but can be used to adjust gain levels to receive appropriate signals when scanning.

❖ AM attenuator

With this feature you can alter the input sensitivity of the AM antenna. There are two modes available – "DX" or, if a strong signal from a local station is causing interference, "Local".

❖ LED indication of signal-strength...

A 10 step LED indicator shows you the strength of your signal – the more lights are lit, the stronger it is.



❖ ... and battery status

The same indicator also checks the condition of the ICF 2001D's batteries – sound battery condition is shown by a series of LED indicators progressing from green (for a healthy battery) to red (when the battery needs replacing).

❖ Casting a light on the subject

Pressing the light button illuminates the ICF 2001D display for 15 seconds and if you then push any of the buttons – to call up a memory preset, for

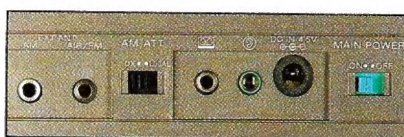
example, or tune in a station – this extends the illuminated display for 15 seconds more.

❖ Three-step tone control

The ICF 2001D has a 3 step tone setting – High, Low and News – that enhances reception to match the subject.

❖ Input and output

If you need to connect an external antenna at any time, there are appropriate antenna terminals provided for AM and AIR/FM bands. Optional accessories are AN 1 for the AM band or an AN 3 for FM/AIR bands, can easily be connected.



❖ High-efficiency diaphragm speaker

The ICF 2001D speaker features an advanced design diaphragm material incorporating a newly developed polymica. Combined with a high power magnet, this produces 92dBs for clear, powerful sound and improved reproduction from low to high volumes.

❖ Ergonomics in action

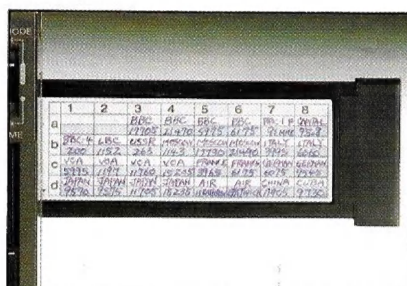
The design of ICF 2001D didn't end with its remarkable specification. Even the optimum location of the keys was exhaustively researched, and there's

even a stand for desk top use and a convenient carrying strap supplied as standard.



❖ Memo card

Beneath the unit is a special "memo-card" holder on which you can record frequencies for up to 32 stations.



❖ Power requirements

3 x D batteries, 4.5V DC, 3V DC, 2 x AA batteries for memory, AC adaptor (240V DC) supplied. Optional car battery cord DCC 127A is available.





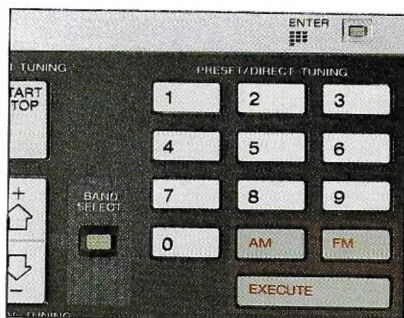
Listen to the world with Sony's design winning portable

For today's people on the move, the ICF 7600D packages Sony's SW know-how in a compact portable receiver that couples startling power and flexibility with one touch ease.

Just half the size of a normal magazine and weighing only 640 grams, the ICF 7600D slips neatly into a briefcase or pocket, yet offers truly worldwide capability. AM broadcasts from 153 - 29995KHz, FM from 76 - 108MHz, plus SSB/CW and amateur wavebands – all are accessible via Sony's unique 4 way tuning.

High-reliability PLL synthesiser

In a crowded SW band where stations transmit at 5KHz intervals, the vital characteristics of an international receiver are sensitivity, selectivity and consistent interference rejection.



The ICF 7600D incorporates a powerful and reliable quartz PLL synthesiser and Sony's Dual Conversion RF circuitry to shield out interference and minimise distortion. The result is strong, clear signals.

Reception is further enhanced by a monolithic crystal filter, a rudder type 6 element ceramic filter and an FET balanced mixer.

A 2 position tone switch (News/Music) is also provided to help you get the reception you want.

Accurate, positive tuning

The ICF 7600D gives you four tuning options.

1. Direct access

Simply key in the frequency on the numeric key-pad for an instant response.

2. One touch memory preset

A total of 10 stations can be memorised for one touch recall.

3. Auto-scan

The auto-scan function allows you to select a band and automatically review all the stations in the band.

4. Manual

If you do not know the exact frequency of a station, or you wish to adjust tuning after auto-scan, you can

manually tune on all wavebands – MW (in 9KHz steps), SW (5KHz), LW (3KHz) and FM (100KHz). Between these steps there is the additional precision of a fine tuner.

Built-in timer and "Sleep" switch

To ensure you don't miss a vital broadcast – or when you wish to use the ICF 7600D as a radio alarm, there is a built-in timer function, while a handy "Sleep" switch automatically turns the receiver off after 65 minutes.

Power requirements and accessories

4 x AA batteries (radio), 2 x AA batteries (computer/clock); wired antenna with clip for SW, connector for external antenna, and AC adaptor (240V AC) are all supplied.

- Multiple LCD Display
- Built-in frequency oscillator for SSB/CW reception
- AM fine tuning in 5KHz steps*
- 65 minute sleep timer
- News/music tone-selector
- MW tuning in 9KHz or 10KHz steps
- Approx dimensions and weight 179(W) x 117(H) x 31(D) mm 640 grams

Quality reception and precise tuning across 9 bands

A compact multi-band radio, the ICF 7600A offer 9 bands including FM/MW and 7 SW bands. Like its larger brothers, the ICF 2001D and ICF 7600D, it features Sony's Dual Conversion circuitry for superior rejection of image interference, and FET transistors in the RF and mixer circuit. A crystal oscillator gives high stability SW band reception, while a 4 element "rudder" type ceramic filter provides high selectivity on AM.

Features to aid tuning include a SW band scale spread across all 7 SW bands and an LED indicator for precise fixing of a particular frequency.

Power-off protection for travellers

To guard against accidental switching-on of the receiver during transit, the ICF 7600A features a power-off locking mechanism.

Power requirements

4 x AA batteries, 6V DC (AC adaptor AC D4 and DC car cord DCC 127A – optional).

Streamlined, light and easy to use

The smallest of Sony's SW receivers, the ICF 4900's streamlined form (144 x 76 x 25mm) conceals considerable capabilities.

Like the ICF 7600A, but in an ultra-compact package, it covers 9 wavebands (FM/MW + 7 SW bands), features Dual Conversion circuitry for low interference reception, and incorporates a crystal oscillator for stable SW band reception.

"Piano-key" band selection

On the ICF 4900, band selection is via feather touch, piano type keys that are beautifully light, very precise and extremely easy-to-use.

Features in common with the ICF 7600A include an LED tuning indicator provided for precise tuning and a short wave band scale spread across all 7 SW bands.

In addition, however, the ICF 4900 has a band selector locking switch that prevents the selector moving while you're on the move!

Power requirements

2 x AA batteries, 3V DC (AC



ICF 7600A

SW The accolade of a design award in the demanding Japanese market indicates that the ICF 7600A is remarkable even by Sony's standards **SW**

9 bands – FM/MW and 7 SW bands:
5.95-6.2 MHz/7.1-7.3 MHz/
9.5-9.8 MHz/11.7-12.0 MHz/
15.1-15.45 MHz/17.7-17.9 MHz/
21.45-21.75 MHz

LED tuning indicator
3 position tone control

Supplied with waveband manual,
carrying case and wrist strap
Approx dimensions and weight
179(W) x 117(H) x 31(D)mm
600 grams



ICF 4900

SW Small in size, big in performance **SW**

adaptor AC D2 and DC car cord DCC 127A – optional)

9 bands – FM/MW and 7 SW bands:
3.7-4.2 MHz/5.85 - 6.35 MHz/
9.4 - 9.9 MHz/11.6 - 12.1 MHz/
15.0 - 15.5 MHz/17.55 - 18.05 MHz/
21.4 - 21.9 MHz

High performance tuner
Dual conversion circuitry
LED tuning indicator

Band selector locking switch
Complete with carrying case,
earphone and waveband manual
Approx dimensions and weight
144(W) x 76(H) x 25(D) mm
245 grams



Multi-band radio and stereo cassette recorder

The WA-8000 brings together two technologies in which Sony's strengths are second to none – multi frequency radio and personal audio. The result is a powerful combination of a 9 waveband radio, including FM stereo, and a stereo cassette recorder with such features as auto-reverse. All incorporated in beautifully distinctive slimline styling.

FM/MW and 7 SW bands

The receiver's stunning specification begins with 9 bands, FM/MW

and 7 SW bands – accessible through the same high performance tuning system.

Digital clock with LCD display and timer

The useful digital clock features an easy-to-read LCD display and doubles as a timer, so you can be sure of catching important transmissions.

Stereo FM and playback

The WA 8000 features a built-in mono speaker, but comes complete

with lightweight stereo headphones so that you can listen to FM stereo radio broadcasts and hear stereo tapes on playback.

For recording, the WA 8000 features a built-in high sensitivity monaural microphone. Stereo recording is possible via the optional ECM 102 microphone.

Power requirements

2 x AA batteries, 3V DC (AC adaptor AC D2 and DC car cord DCC 127A – optional).

- FM/MW and 7 SW bands:
5.95 - 6.2 MHz/7.1-7.3 MHz/
9.5 - 9.8 MHz/11.7-12.0 MHz/
15.1-15.45 MHz/17.7-17.9 MHz/
21.45 - 21.75 MHz
- LED tuning indicator
- Normal/metal tape selector
- One touch auto reverse stereo recording
- Tone control
- 12/24 hour LCD clock timer
- Approx dimensions and weight
196(W) x 93(H) x 37(D) mm
650 grams



Compact multi-band radio/recorder

A really lightweight (just 570 grams with batteries) marriage of multi-band capability with mono tape cassette technology, the WA 6000 gives high quality reception of FM/MW and 5 SW bands covering all the world's major SW broadcasting organisations.

Sophisticated record/playback controls

The WA 6000 is especially strong

in its record/playback functions. Features include "cue-and-review" controls, whereby unwanted portions of a tape can be skipped or relevant sections quickly repeated and "instant-edit", which enables you to switch instantly into recording mode to correct previously recorded portions. A "quick review" function offers the option, during recording, of listening to material just recorded. A tape counter provides essential

"tape management" data.

A built in monaural microphone is provided, and an external microphone can be connected using a Sony miniplug. Dubbing from and to another recorder speaker is possible using the optional RK G64 connecting cord.

LED tuning

An LED indicator provides accurate visual guidance during tuning, lighting-up when the strongest signal is being received.

Power and requirements

4 x AA batteries, 6V DC (AC adaptor ACD4 and DC car cord DCC 127A – optional).

- FM/MW and 5 SW bands:
5.95 - 6.2 MHz/9.5 - 9.8 MHz/
11.7-12.0 MHz/15.1-15.5 MHz/
17.6 - 18.0 MHz
- LED tuning indicator
- Tape counter
- Tone control
- Built-in microphone
- Approx dimensions and weight
187(W) x 108(H) x 50(D) mm
570 grams

To help you enjoy your Sony Short Wave radio to the fullest extent we have listed below some of the leading international broadcasting organisations with specific language broadcasts being identified. There is a more comprehensive guide in the Short Wave Handbook. All frequencies shown on this page are in KHz.

BBC (London)

Arabic

Middle Eastern Service: 639, 702, 720, 3990, 6030, 7140, 9590, 9625, 9825, 11680, 11740, 15235, 11720, 15180, 17715, 21630

North African Service: 6120, 9825, 11680, 15180, 17715

English (World Service)

North American Service: 5975, 6120, 6175, 6195, 7325, 9510, 9515, 9740, 9915, 11750, 11775, 15070, 15215, 15260, 17790, 21550

European Service: 648, 810, 1296, 3955, 3990, 5975, 6010, 6015, 6050, 6180, 6195, 7120, 7150, 7185, 7325, 9410, 9580, 9660, 9750, 9760, 11750, 11760, 11955, 12095, 15070, 17705, 17790, 21470, 21550, 21710

Middle Eastern Service: 639, 702, 720, 1323, 1413, 6050, 7160, 7325, 9410, 11740, 11760, 11955, 12095, 15070, 15380, 15420, 17790, 21710

African Service: 1413, 5975, 6005, 6180, 6190, 7140, 7160, 7185, 7325, 9410, 9515, 9600, 9715, 11745, 11750, 11830, 11860, 11955, 12095, 15070, 15400, 15420, 15445, 17705, 17740, 17790, 17880, 17885, 18080, 21470, 21640, 21660, 21710, 25650

South American Service: 5975, 6005, 6120, 6175, 7325, 9515, 9915, 11750, 15260

Australia & New Zealand Service: 5975, 6195, 7145, 7150, 7325, 9410, 9510, 9570, 9640, 9740, 11750, 11775, 11955, 15070, 15310, 21550

South Asian Service: 1413, 5965, 6195, 7135, 7160, 9410, 9580, 9740, 11750, 11760, 11955, 15070, 15310, 15380, 17790, 21550, 21710

East & South East Asian Service: 3915, 6195, 7120, 9570, 9740, 11750, 11955, 15280, 15310, 15435, 17880, 21550

French

European Service: 648, 3955, 6125, 6195, 7165, 7210, 7295, 9600, 9625, 7295, 9915, 11780

African Service: 6120, 7105, 7150, 9580, 9600, 9825, 9915, 11680, 11720, 11825, 15105, 15115, 15150, 17810, 21640

German

648, 810, 1296, 3955, 6195, 7260, 7295, 9530, 9565, 9625

Japanese

6185, 7180, 9580, 9725, 11865, 11955, 15360, 18080

Spanish

South American Service: 6055, 6110, 6155, 7140, 9765, 9825, 11820, 17830, 21490

VOICE OF AMERICA

English

European Service: 792, 1197, 3980, 5995, 6035, 6040, 6060, 7170, 7200, 7325, 9650, 9670, 9715, 9760, 11760, 15205

Middle Eastern Service: 1260, 5965, 6040, 7200, 7205, 7325, 9660, 9740, 9760, 9770, 11760, 11920, 11925, 15185, 15205, 15260

African Service: 621, 3990, 5995, 6035, 6040, 6045, 6080, 6095, 6125, 7170, 7195, 7280, 7325, 9530, 9540, 9550, 9575, 9620, 9670, 9745, 9760, 11720, 11835, 11840, 11915, 15205, 15240, 14410, 15415, 15445, 15580, 15600, 17715, 17785, 17870, 21485, 21660, 21680, 21840, 26000, 26040

South American Service: 1580, 5995, 6130, 9455, 9650, 9690, 11580, 11675, 11740, 15205, 17640, 17730

Australia & New Zealand Service: 6110, 11715, 11760, 15160, 15185, 15290, 15425, 17740

South Asian Service: 1575, 6110, 7105, 7115, 7125, 7200, 7205, 9645, 9700, 9740, 9760, 11710, 11925, 15205, 15215, 15250, 15395, 17735, 17745, 21540

East & South East Asian Service: 1575, 6110, 7230, 7275, 9565, 9760, 9770, 11715, 11760, 11775, 15160, 15185, 15290, 15425, 17740, 17820, 21460

RADIO MOSCOW

Radio Moscow utilizes lots of frequency bands. They are too many to list them all, however, the signal strength is excellent.

DEUTSCHE WELLE

English

North American Service: 5960, 6040, 6085, 6130, 6145, 9545, 9545, 9565, 9590, 11705, 11785

German

1557, 3995, 6040, 6045, 6075, 6085, 6100, 6145, 7145, 7175, 7225, 7235, 9545, 9570, 9605, 9615, 9640, 9690, 9700, 9715, 9735, 11705, 11720, 11730, 11785, 11795, 11820, 11855, 11945, 15245, 15270, 15275, 15320, 15410, 17715, 17810, 11955, 15105, 15160, 15205, 15210, 17845, 17860, 21560, 21680

RADIO AUSTRALIA

English

North American Service: 9580, 15320, 15395, 17795

European Service: 6035, 7215, 9770, 11910, 15240

French

15140, 15160, 15320, 17795, 17750, 15240, 15320, 17865, 21525

RADIO BEIJING

English

North American Service: 6160, 9820, 9860, 9880, 11650, 11860, 11945, 11970, 15120, 15385, 15520

European Service: 4130, 6860, 6995, 7590, 9860

RADIO JAPAN

English

General Service: 9505, 9575, 9580, 9605, 9645, 9675, 11815, 11840, 11950, 15195, 15210, 15235, 15300, 17755, 17785, 17810, 17865, 21550, 21575, 21695

North American Service: 11710, 15195, 15300, 17825, 17825, 21610, 21640

European Service: 15235, 17785

French

6080, 7105, 9615, 9645, 11705, 11840, 15235, 15315, 17870, 19570

German

6080, 7105, 9570, 9615, 11705, 15235, 15315, 17870, 6080, 7105, 9615

Japanese

General Service: 6085, 9505, 9575, 9580, 9605, 9645, 9675, 11810, 11815, 11840, 11860, 11950, 15195, 15210, 15235, 15300, 17755, 17785, 17810, 17865, 21550, 21575, 21695

American Service: 15195, 17825, 21610, 21640, 9525, 11950, 15390

RADIO CANADA INTERNATIONAL

English, French

9555, 9625, 11720, 11915, 11925, 11935, 11945, 15150, 15315, 15325, 17820, 17875, 21695 (KHz)

RADIO FRANCE INTERNATIONAL

French, English

11705, 11730, 11845, 11930, 15155, 15200, 15300, 15313, 15360, 15425, 15435, 17720, 17845, 17850, 21515, 21525, 21580, 21675, 25900

Other frequency allocations in the Short Wave Band

Maritime Mobile 4.063 - 4.438 6.200 - 6.525 8.195 - 8.815
12.330 - 13.200 16.460 - 17.360 22.000 - 22.855 26.100 - 26.175

Aeronautical Mobile 4.650 - 4.750 6.525 - 6.765 8.815 - 9.040
10.005 - 10.100 11.175 - 11.400 13.200 - 13.360 15.010 - 15.100
17.900 - 18.030 21.870 - 22.000 23.200 - 23.350

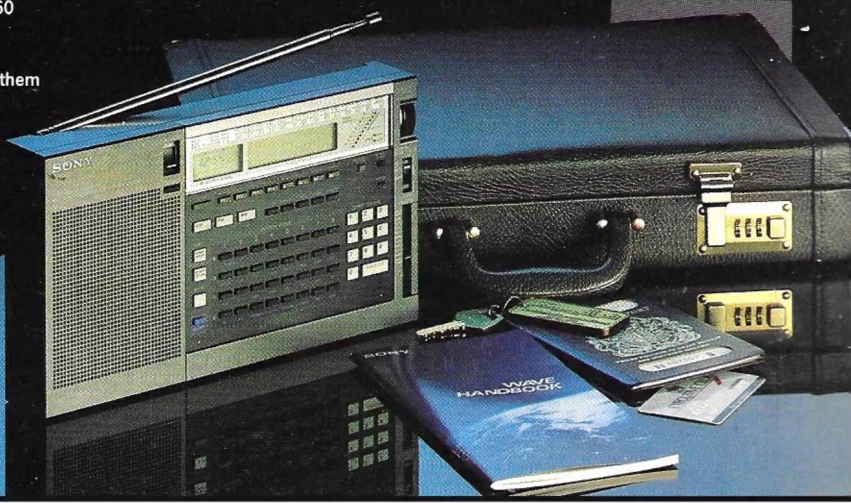
Standard Freq. & Time Signals 4.995 - 5.005 9.995 - 10.005

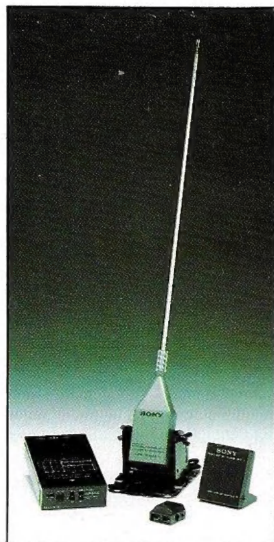
14.990 - 15.010 19.990 - 20.010 24.990 - 25.010

Amateur Radio 7.00 - 7.300 10.100 - 10.150 14.000 - 14.350

21.000 - 21.450 24.890 - 24.990 28.000 - 29.700

NOTE: Shortwave reception will be affected by various factors, including sunspots, atmospheric conditions and other disturbances.

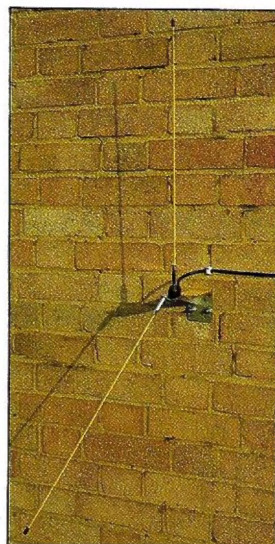




AN 1

The AN 1 external antenna with built-in FET RF amplifier is a recommended option for the ICF 2001D and the ICF 7600D and any other Sony world radio. This high-performance antenna pulls in distant, weak stations with ease. An attenuator control is provided so that the AN 1 can be used for both distant and local reception.

Controller: 80 x 31 x 140 mm
Antenna: 1.5 m
Coaxial cable: 12 m
Weight: 340 g (approx)



AN 3

The AN 3 is a compact, light-weight, omnidirectional antenna, which receives wide range bands as well as Air Band. It is easily assembled and installed and can be used with FM and AIR bands.

Antenna: 600 mm (approx)
Bracket: 65 x 75 x 175 mm
Coaxial cable: 15 m
Weight: 950 g (approx)

	ICF 2001D	ICF 7600D	ICF 7600A	ICF 4900	WA 8000	WA 6000
Circuit	AIR/AM Dual Conversion FM Super Heterodyne	AM Dual Conversion FM Super Heterodyne	FM/MW Super Heterodyne SW Dual Conversion	FM/MW Super Heterodyne SW Dual Conversion	Super Heterodyne	Super Heterodyne
Main Components	Crystal x2, IC x23 FET x14, LSI x2	Crystal x2, IC x4 FET x9, LSI x2	Crystal x7, IC x2 FET x6	Crystal x7 IC x3, FET x3	IC x4, FET x9	IC x2, FET x2
Frequency	AIR 116 ~ 136 MHz FM 76 ~ 108 MHz AM 150 ~ 29999.9 KHz	FM 76 ~ 108 MHz MW 522 ~ 1,611 KHz SW 1,615 ~ 29,995 KHz LW 153 ~ 519 KHz SSB/CW 153 ~ 29,995 KHz	FM 76 ~ 108 MHz MW 530 ~ 1,605 KHz SW 1 5.95 ~ 6.2 MHz 2 7.1 ~ 7.3 MHz 3 9.5 ~ 9.8 MHz 4 11.7 ~ 12.0 MHz 5 15.1 ~ 15.45 MHz 6 17.7 ~ 17.9 MHz 7 21.45 ~ 21.75 MHz	FM 88 ~ 108 MHz MW 530 ~ 1,605 KHz SW 1 3.7 ~ 4.2 MHz 2 5.85 ~ 6.35 3 9.4 ~ 9.9 MHz 4 11.6 ~ 12.1 MHz 5 15.0 ~ 15.5 MHz 6 17.55 ~ 18.05 MHz 7 21.4 ~ 21.9 MHz	FM 76 ~ 108 MHz MW 530 ~ 1,605 KHz SW 1 5.95 ~ 6.2 MHz 2 7.1 ~ 7.3 MHz 3 9.4 ~ 9.8 MHz 4 11.7 ~ 12.0 MHz 5 15.1 ~ 15.45 6 17.7 ~ 17.9 MHz 7 21.45 ~ 21.75 MHz	FM 88 ~ 108 MHz MW 530 ~ 1,605 KHz SW 1 5.95 ~ 6.2 MHz 2 9.5 ~ 9.8 MHz 3 11.7 ~ 12.0 MHz 4 15.1 ~ 15.5 MHz 5 17.6 ~ 18.0 MHz
Antenna	AIR/FM/SW Telescopic Ant MW/LW Bar Ant	FM/SW Telescopic Ant MW/LW Bar Ant	FM/SW Telescopic Ant MW Bar Ant	FM/SW Telescopic Ant MW Bar Ant	FM/SW Telescopic Ant MW Bar Ant	FM/SW Telescopic Ant MW Bar Ant
External Antenna	AIR/FM Ext Ant AM Ext Ant	FM/SW Ext Ant				
Speaker	10 cmø	7.7 cmø	7.7 cmø	5 cmø	3.6 cmø	5.0 cmø
Max output	380 mW (EIAJ/DC)	400 mW (EIAJ/DC)	450 mW (EIAJ/DC)	100 mW (EIAJ/DC)	Speaker 200 mW (EIAJ/DC) Headphone 20mW + 20mW	230 mW (EIAJ/DC)
Jack						
Earphone	•	•	•	•		•
Rec	•	•	•			
Headphone					•	
Aux						
Ext Power	•	•	•	•	•	•
Other						Microphone Jack
Power Supply						
Batt	D size x3 4.5V (Radio) AA x2 3V (Computer/Clock)	AA x4 6V (Radio) AA x2 3V (Computer/Clock)	AA x4 6V	AA x2 3V	AA x2 3V	AA x4 6V
AC	AC 240V Supplied AC Adaptor	AC 240V Supplied AC Adaptor	AC 240V Optional AC Adaptor	AC 240V Optional AC Adaptor	AC 240V Optional AC Adaptor	AC 240V Optional AC Adaptor
Car Batt	DC 4.5V Optional DCC 127A	DC 6V Optional DCC 127A	DC 6V Optional DCC 127A	DC 3V	DC 3V	DC 6V Optional DCC 127A
Battery Life (Alkaline batteries)	FM 45 Hrs (Approx) AIR/AM 32 Hrs (Approx) Computer/Clock 1 Yr (Appx)	Radio 12 Hrs (Approx) Computer/Clock 1 Yr (Appx)	21 Hrs (Approx)	22 Hrs (Approx)	Playback 2.5 Hrs (Approx) Recording 1.5 Hrs (Approx)	Playback 4 Hrs (Approx) Recording 3 Hrs (Approx)

Dealer Stamp

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